

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4914 - L2 Version 3  
Chandra X-Ray Center

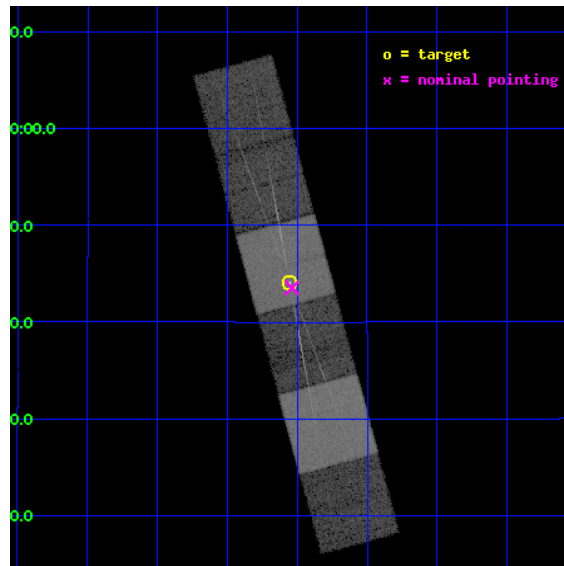
L2 Processing Date : Nov 13 2012

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# 1 Front

seq_num	700995	Sequence number
obs_id	4914	Observation id
title	Evolution of Active Galaxies: Exploring the NLS1-Starburst Connection	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	Mrk 705	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	141.51375	Observer's specified target RA [deg]
dec_targ	12.734444	Observer's specified target Dec [deg]
ra_nom	141.50950679917	Nominal RA [deg]
dec_nom	12.72566473541	Nominal Dec [deg]
roll_nom	254.86627268405	Nominal Roll [deg]
revision	3	Processing version of data
ontime	21257.599920809	Sum of GTIs [s]
livetime	20988.423390822	Livetime [s]
ontime4	21257.599920809	Sum of GTIs [s]
ontime5	21257.599920809	Sum of GTIs [s]
ontime6	21254.35901016	Sum of GTIs [s]
ontime7	21257.599920809	Sum of GTIs [s]
ontime8	21254.358920604	Sum of GTIs [s]
ontime9	21257.599920809	Sum of GTIs [s]
l2events	258980	Number of level 2 events

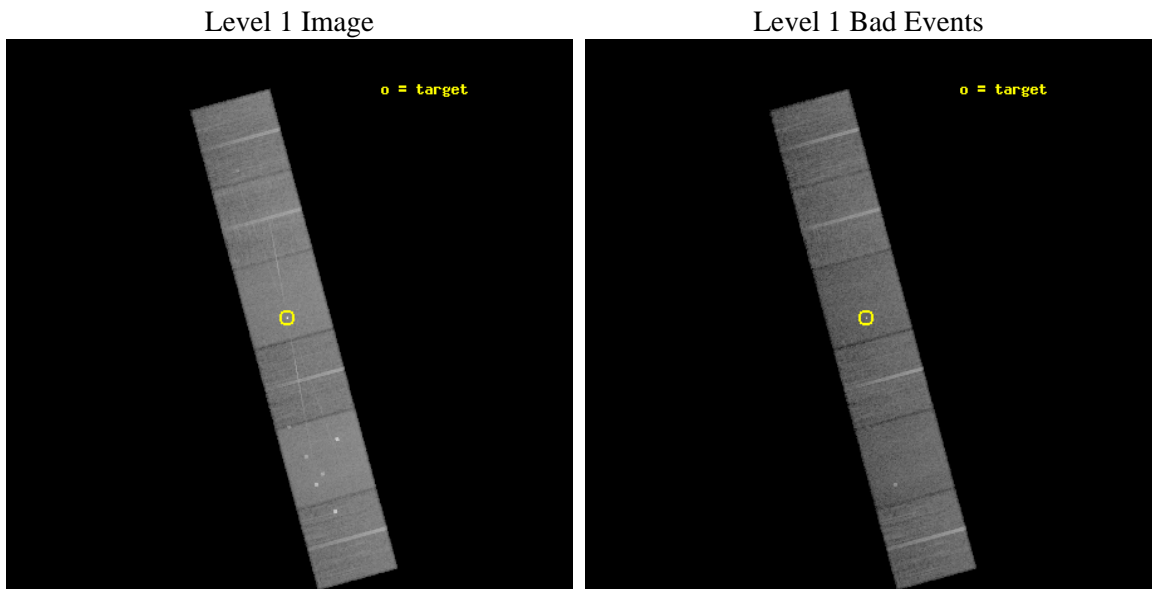




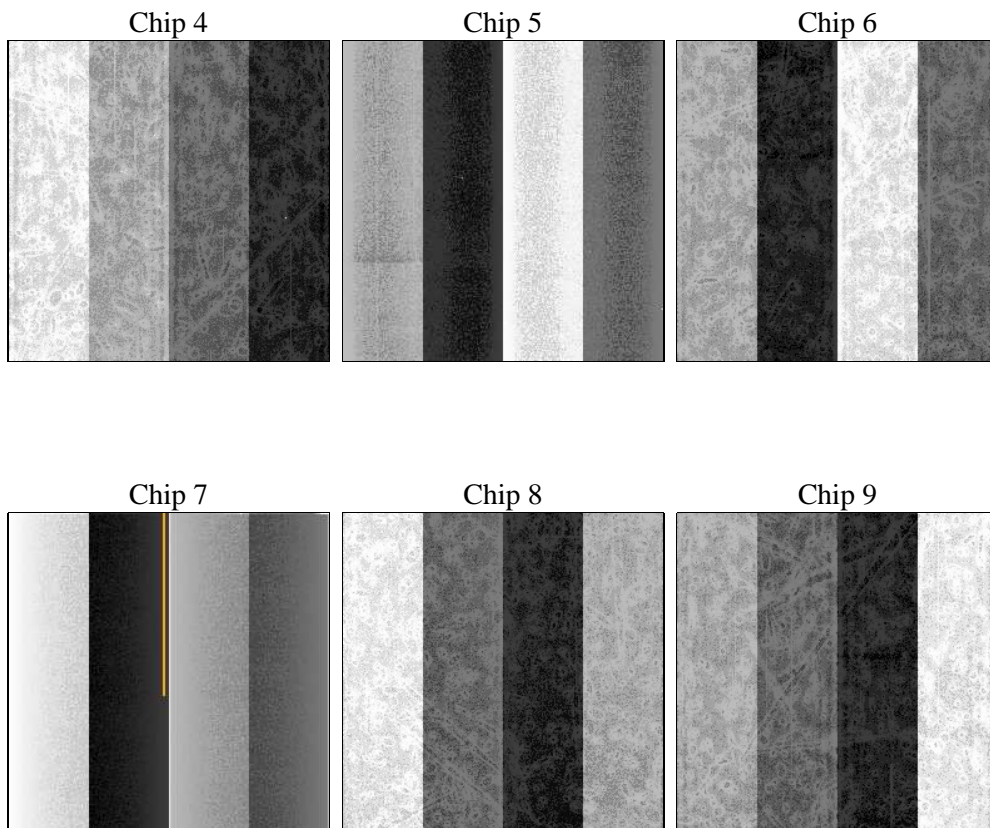
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	21420.824000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	21257.599920809	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime4	21257.599920809	Sum of GTIs [s]
date	2012-11-13T20:24:32	Date and time of file creation	ontime5	21257.599920809	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	21254.35901016	Sum of GTIs [s]
			ontime7	21257.599920809	Sum of GTIs [s]
			ontime8	21254.358920604	Sum of GTIs [s]
			ontime9	21257.599920809	Sum of GTIs [s]
			l1events	1082539	Number of level 1 events

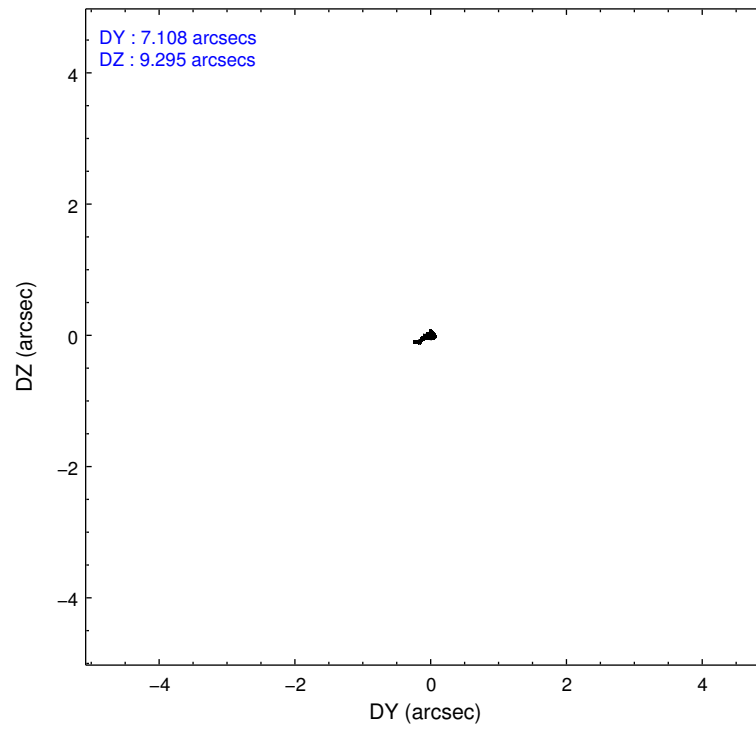
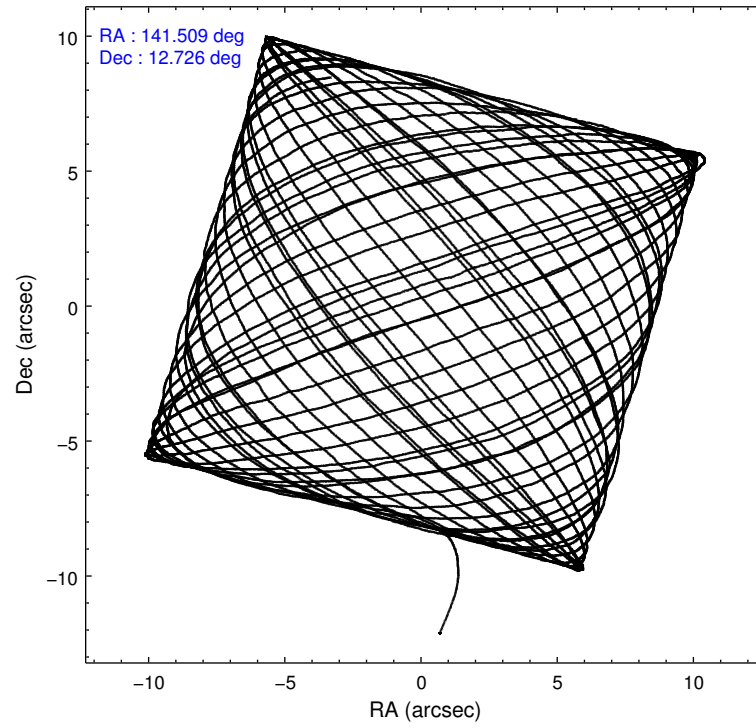
### 2.1.4 Events

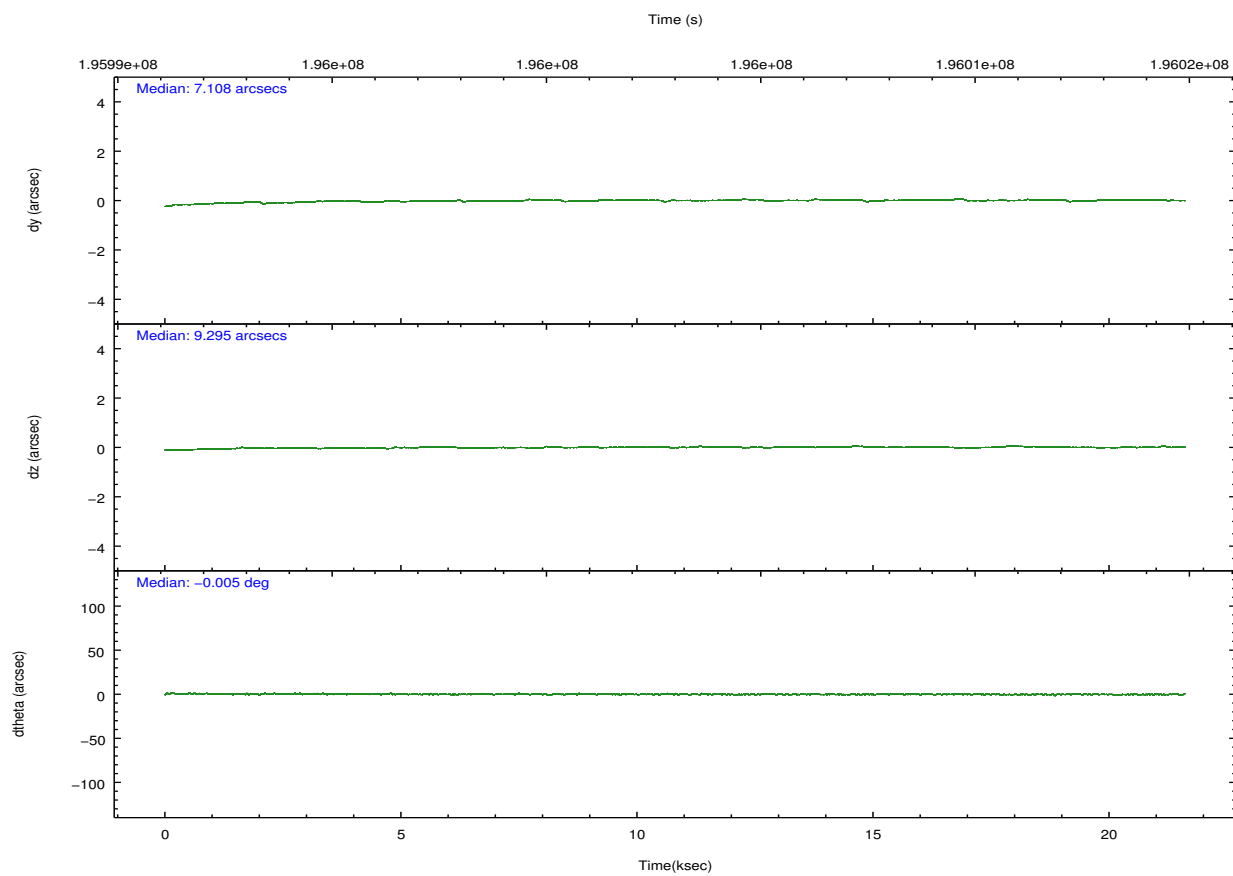
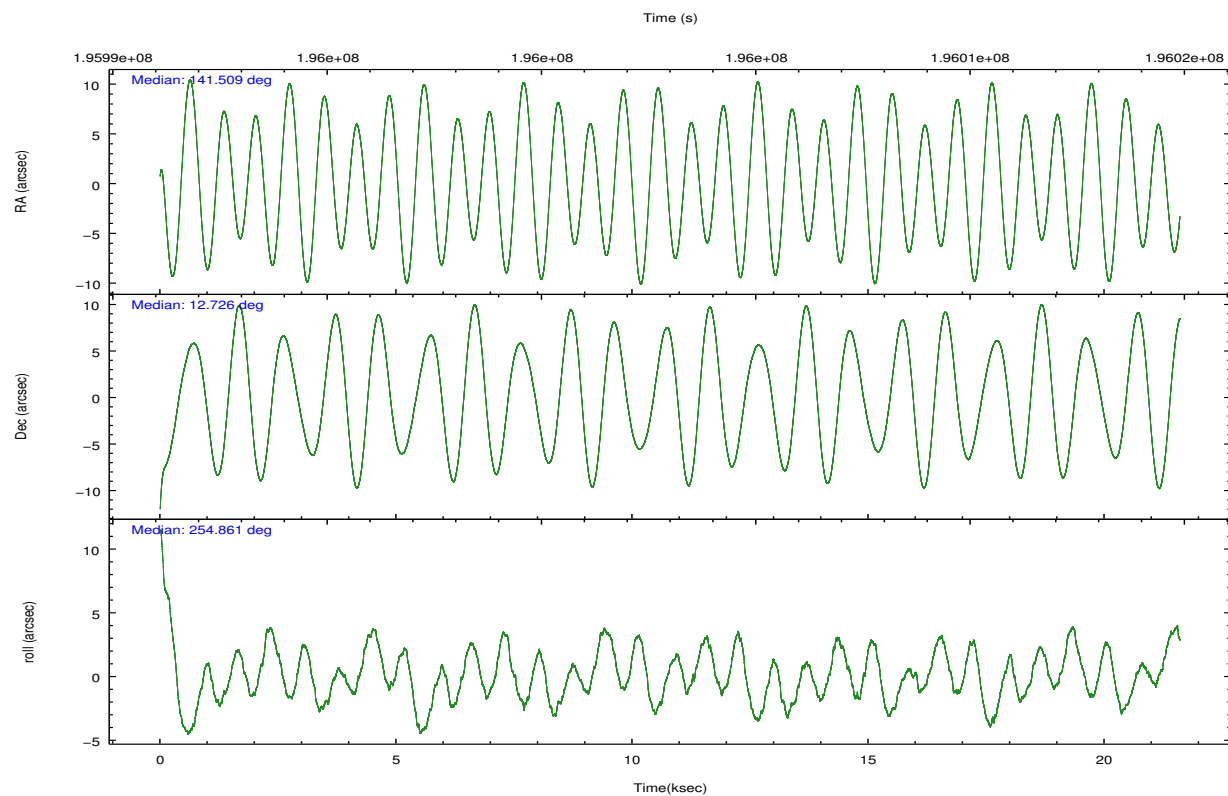
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	166682	223393	153991	205064	187247	146162	grade 0 events	14565	13967	10835	9134	15458	9605
rejected events	140802	118523	130757	115936	144656	124913		8%	6%	7%	4%	8%	6%
rejected %	84%	53%	84%	56%	77%	85%	grade 1 events	177	301	83	290	120	94
								0%	0%	0%	0%	0%	0%
							grade 2 events	4090	30644	4329	17728	8667	3822
								2%	13%	2%	8%	4%	2%
							grade 3 events	2046	3997	1962	8036	4277	1966
								1%	1%	1%	3%	2%	1%
							grade 4 events	1932	3817	1996	7969	4206	1885
								1%	1%	1%	3%	2%	1%
							grade 5 events	6404	16125	6544	19155	8825	7110
								3%	7%	4%	9%	4%	4%
							grade 6 events	3255	52470	4116	46283	10003	3974
								1%	23%	2%	22%	5%	2%
							grade 7 events	134213	102072	124126	96469	135691	117706
								80%	45%	80%	47%	72%	80%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	141.501993	141.5095067991732	Subarray requested	NONE	NONE
[deg] Pointing Dec	12.751916	12.72566473540976	Alternating exposures requested	N	N
[deg] Pointing Roll	254.711299	254.8662726840488	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	195992379.184000	195991344.96533			
Observation start date	2004-03-18T10:18:35	2004-03-18T10:02:24			
[s] Observation end time (MET)	196013799.184000	196014114.31633			
Observation end date	2004-03-18T16:15:35	2004-03-18T16:21:54			
Read mode	TIMED	TIMED			

## 2.3 Aspect



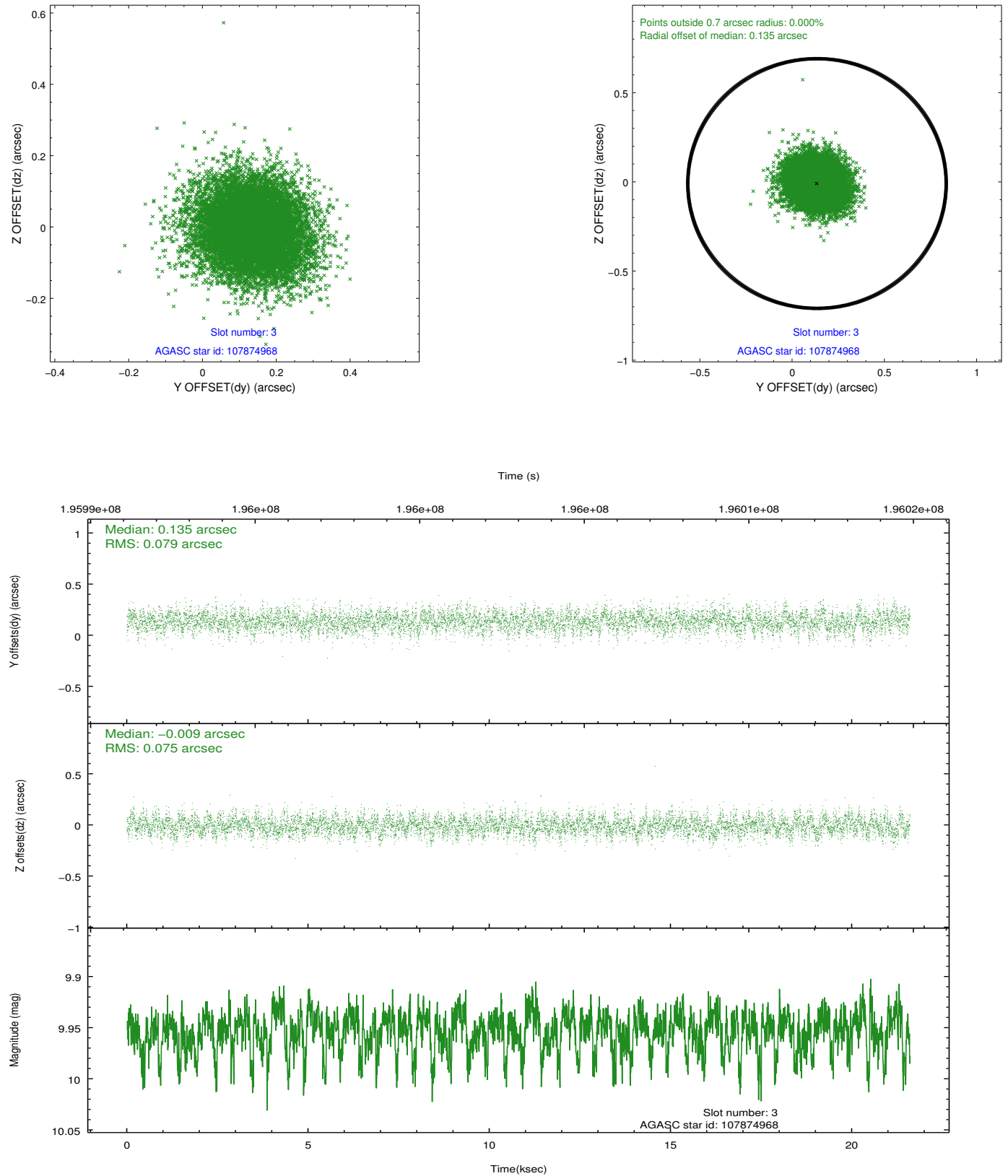


### Slot Statistics

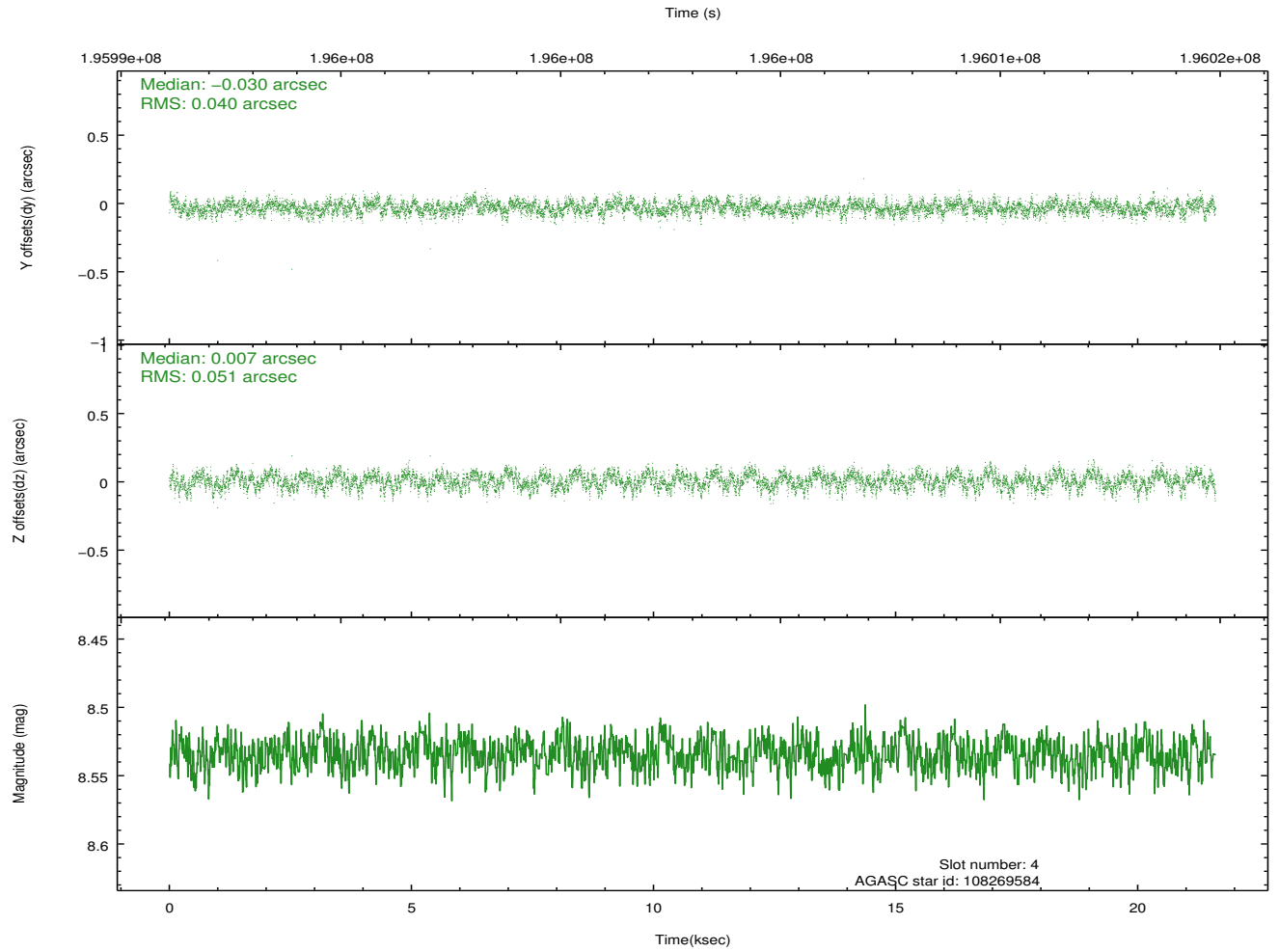
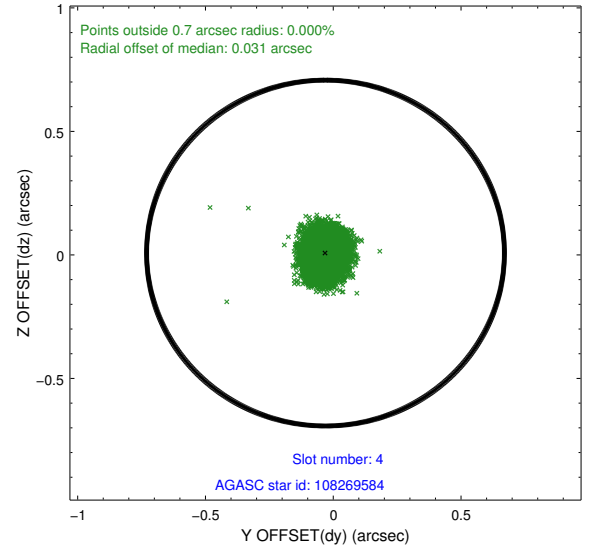
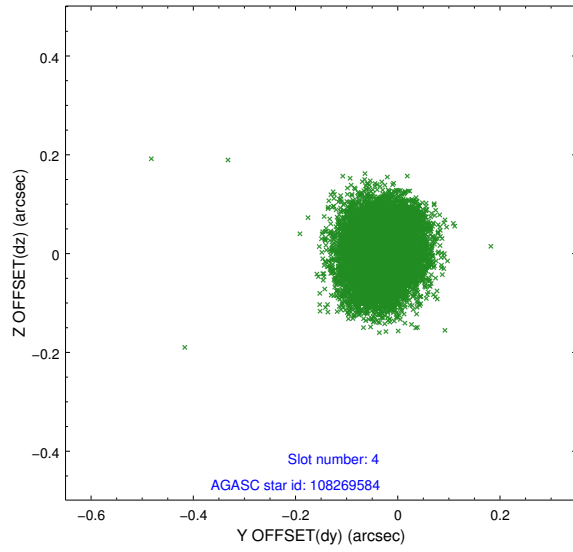
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	5269	-0.031	-0.024	0.007	0.011	0.000000	0.000000	-759.86	-1730.55
1	FID	ACIS-S-4	7.20	5269	0.062	0.021	0.006	0.010	0.000000	0.000000	2153.42	177.84
2	FID	ACIS-S-5	7.24	5268	-0.062	0.012	0.007	0.011	0.000000	0.000000	-1812.54	171.65
3	GUIDE	107874968	9.95	10533	0.135	-0.009	0.115	0.188	141.308691	12.185415	2146.79	-118.10
4	GUIDE	108269584	8.53	10533	-0.030	0.007	0.070	0.110	141.684428	12.507889	678.70	850.39
5	GUIDE	108273032	9.08	10536	0.091	0.025	0.080	0.131	141.083954	12.520007	1192.16	-1196.85
6	GUIDE	108273952	7.81	10539	-0.063	-0.023	0.065	0.107	142.111925	12.674985	-299.37	2138.49
7	GUIDE	108274000	8.70	10533	-0.134	-0.001	0.077	0.123	141.000036	13.388222	-1747.47	-2300.09

## 2.4 Star Slots

### 2.4.1 Slot 3

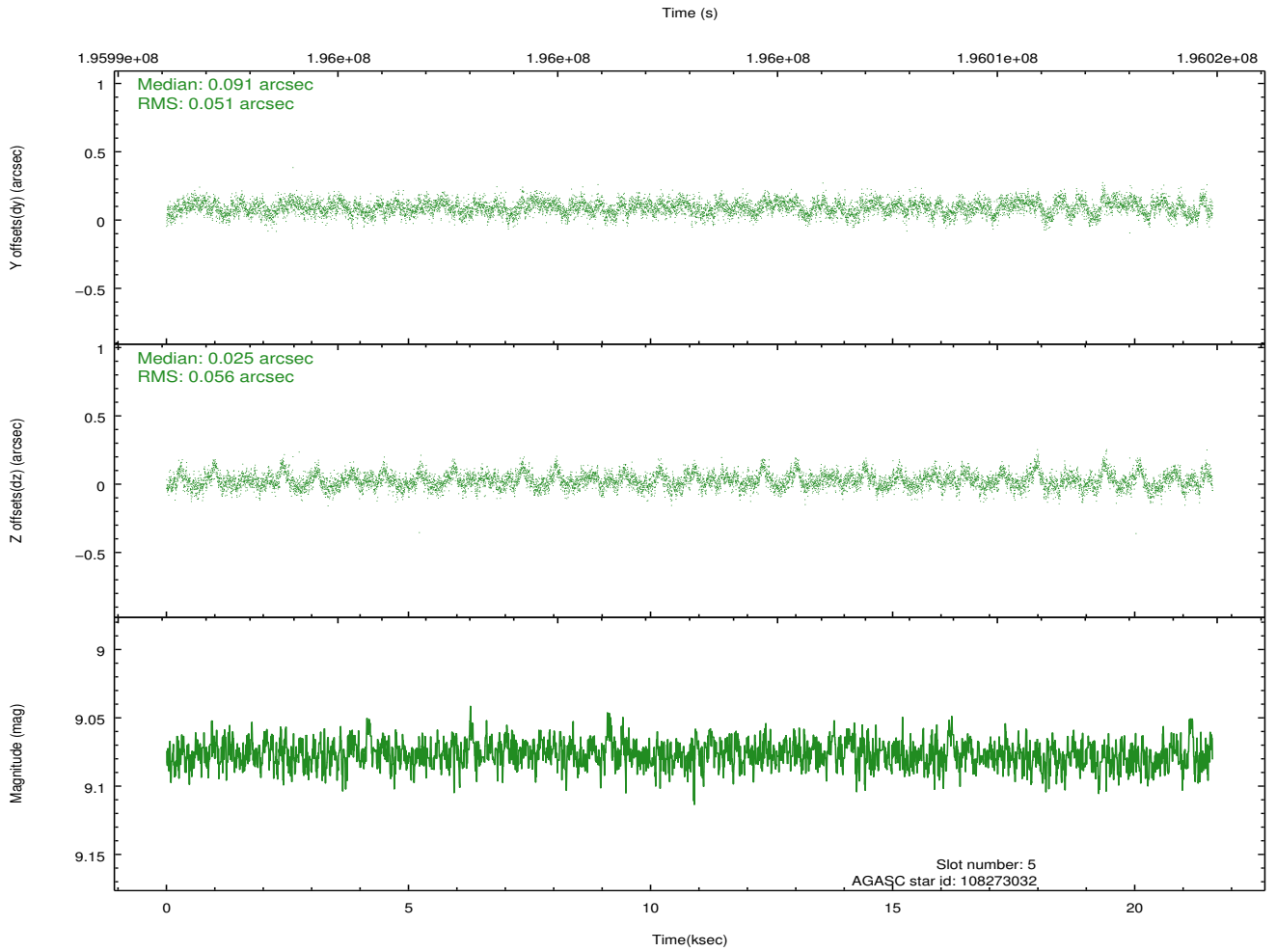
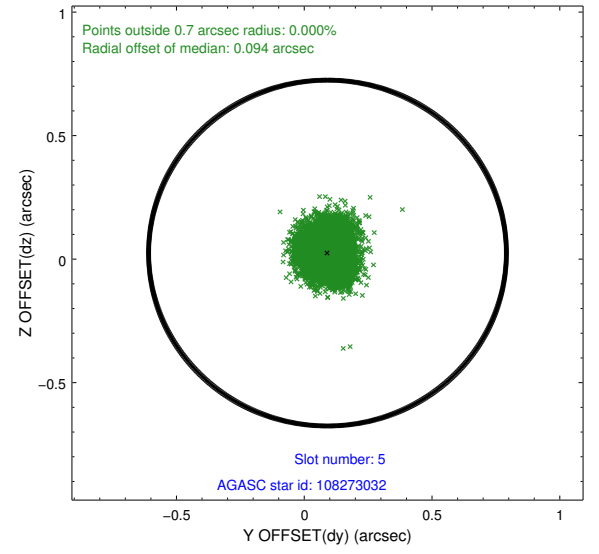
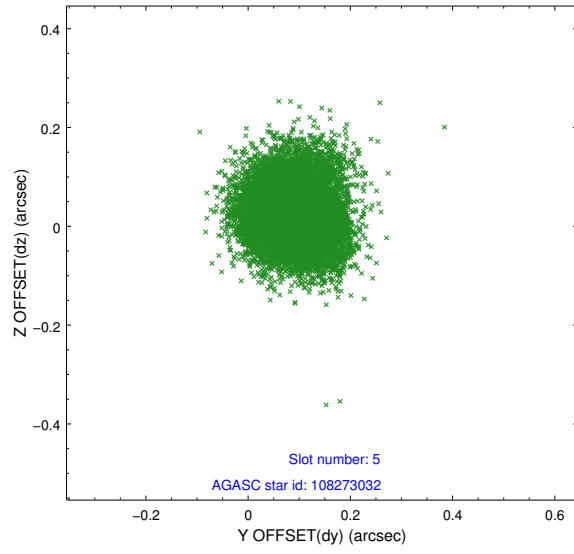


## 2.4.2 Slot 4

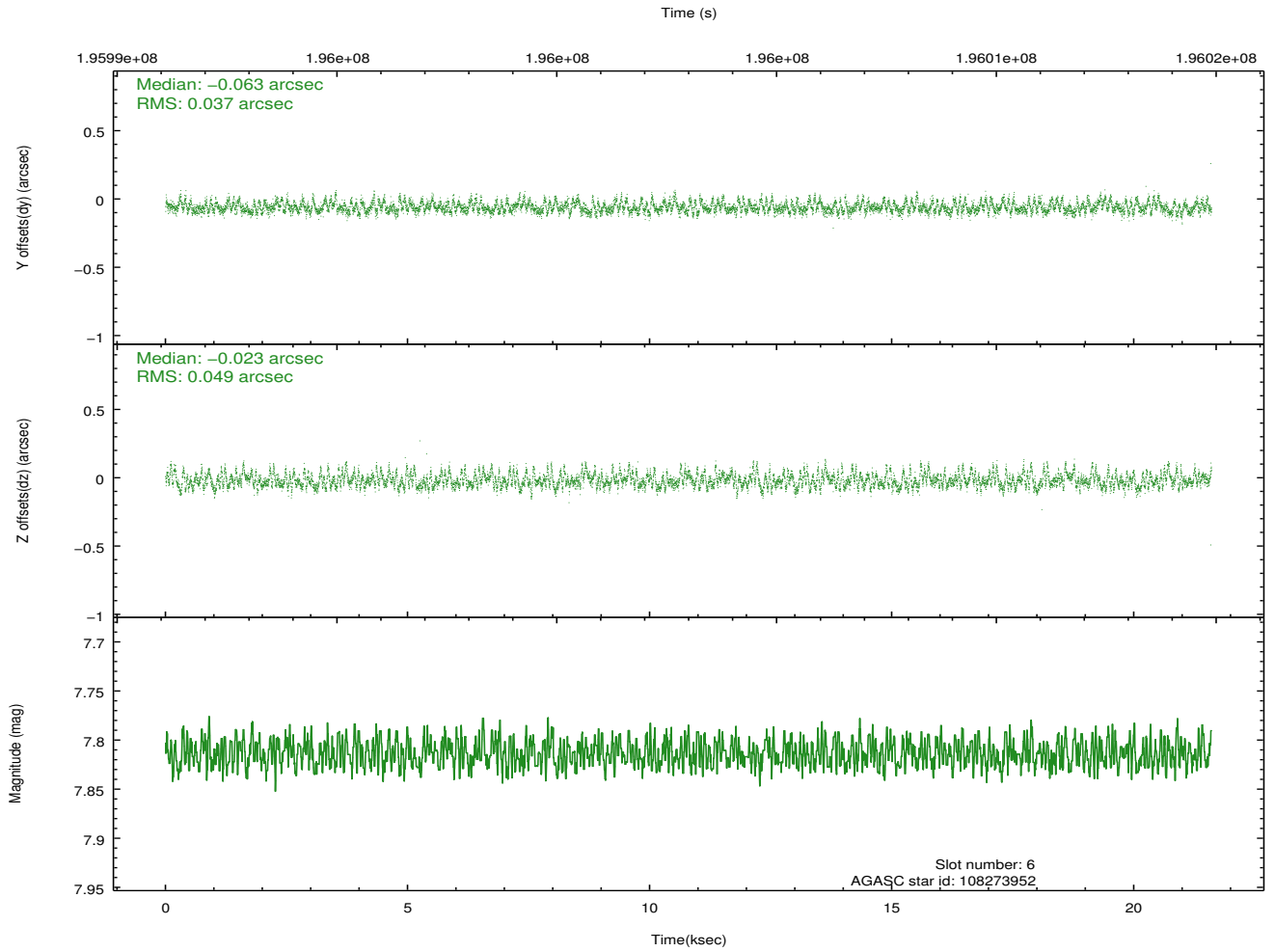
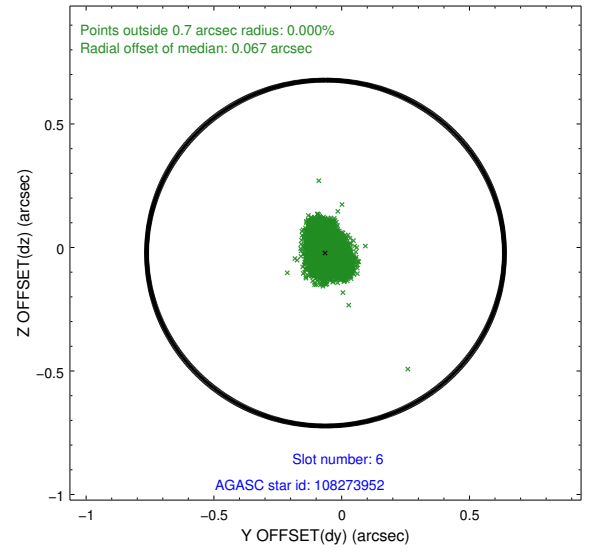
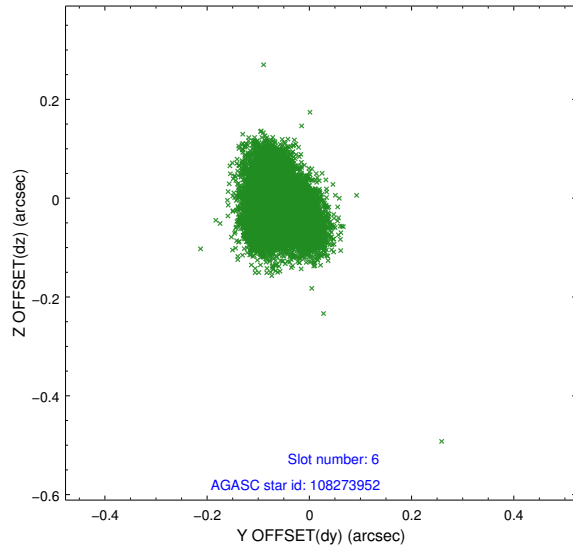




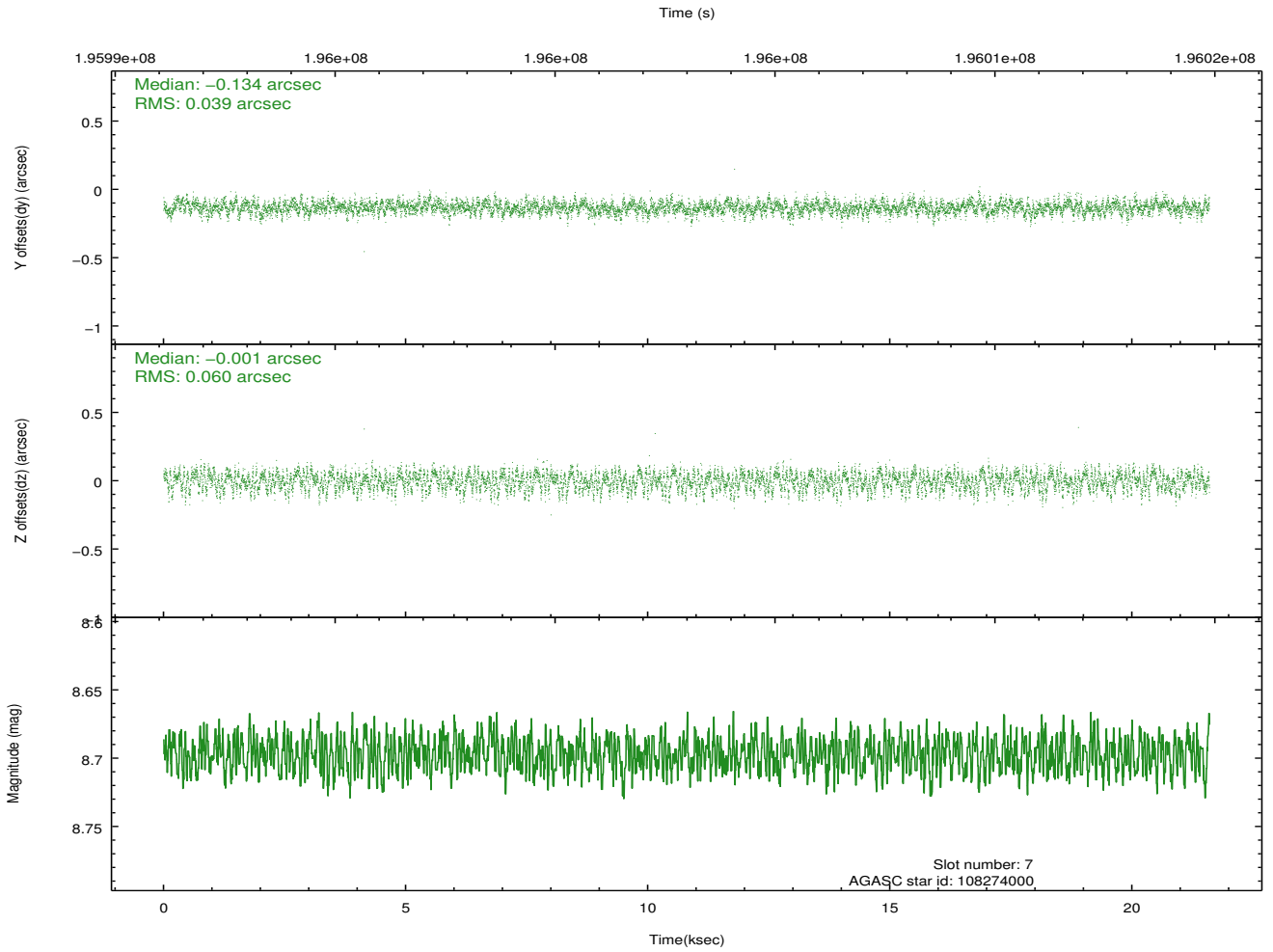
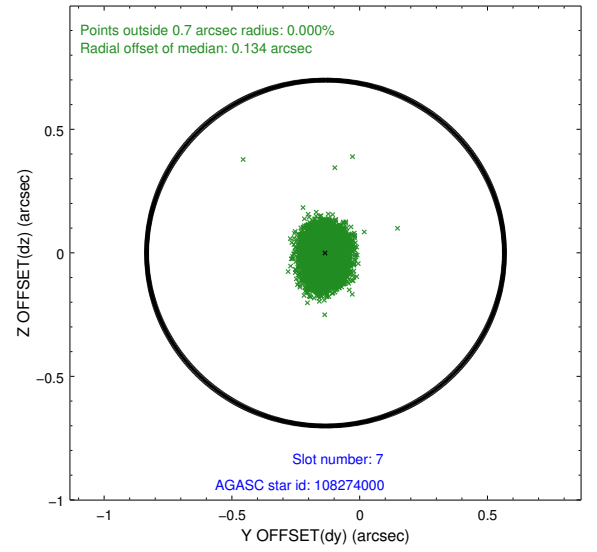
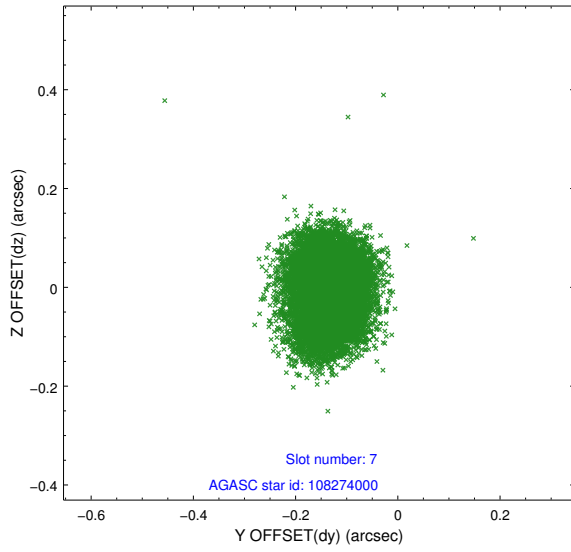
### 2.4.3 Slot 5



## 2.4.4 Slot 6

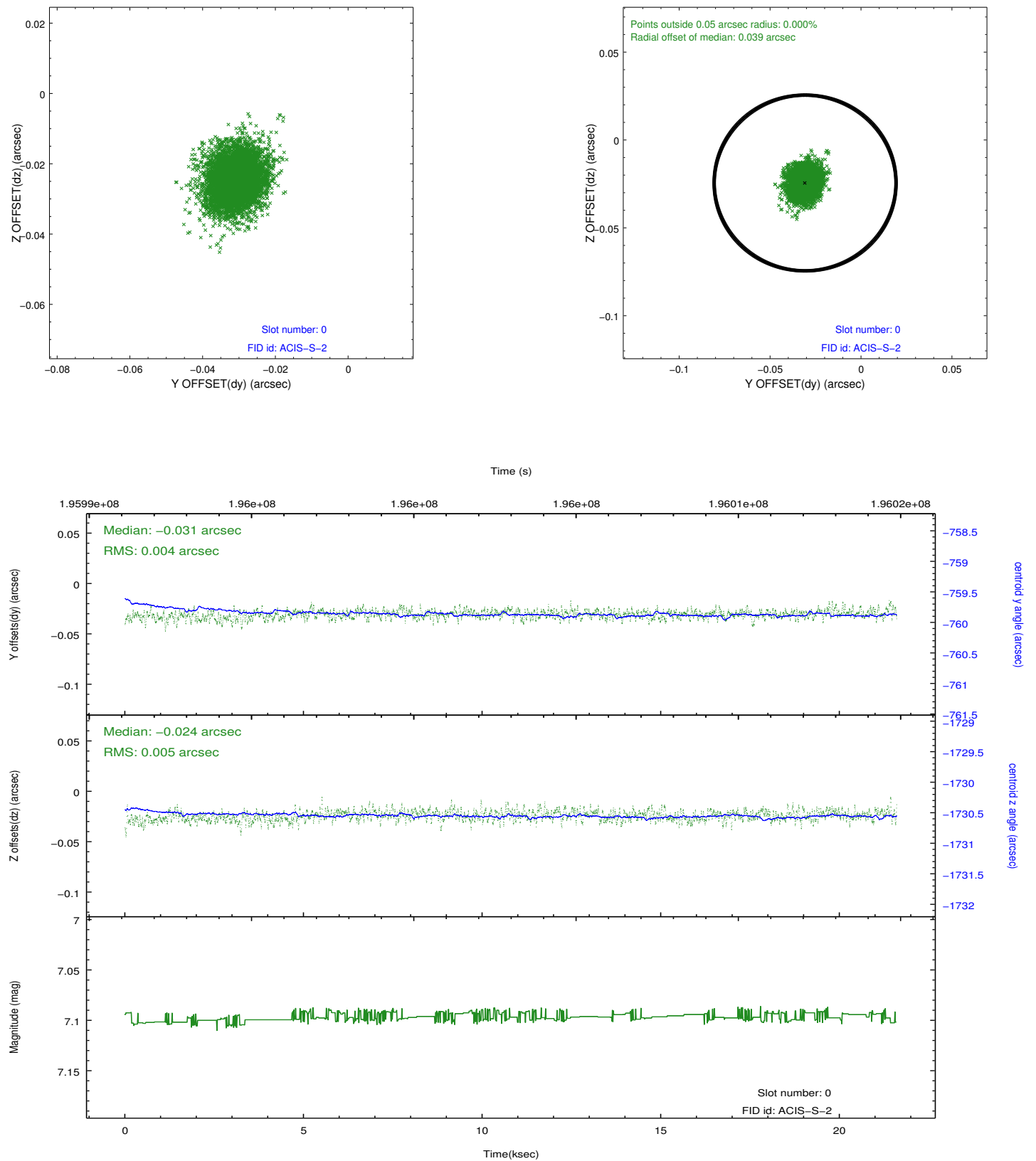


## 2.4.5 Slot 7

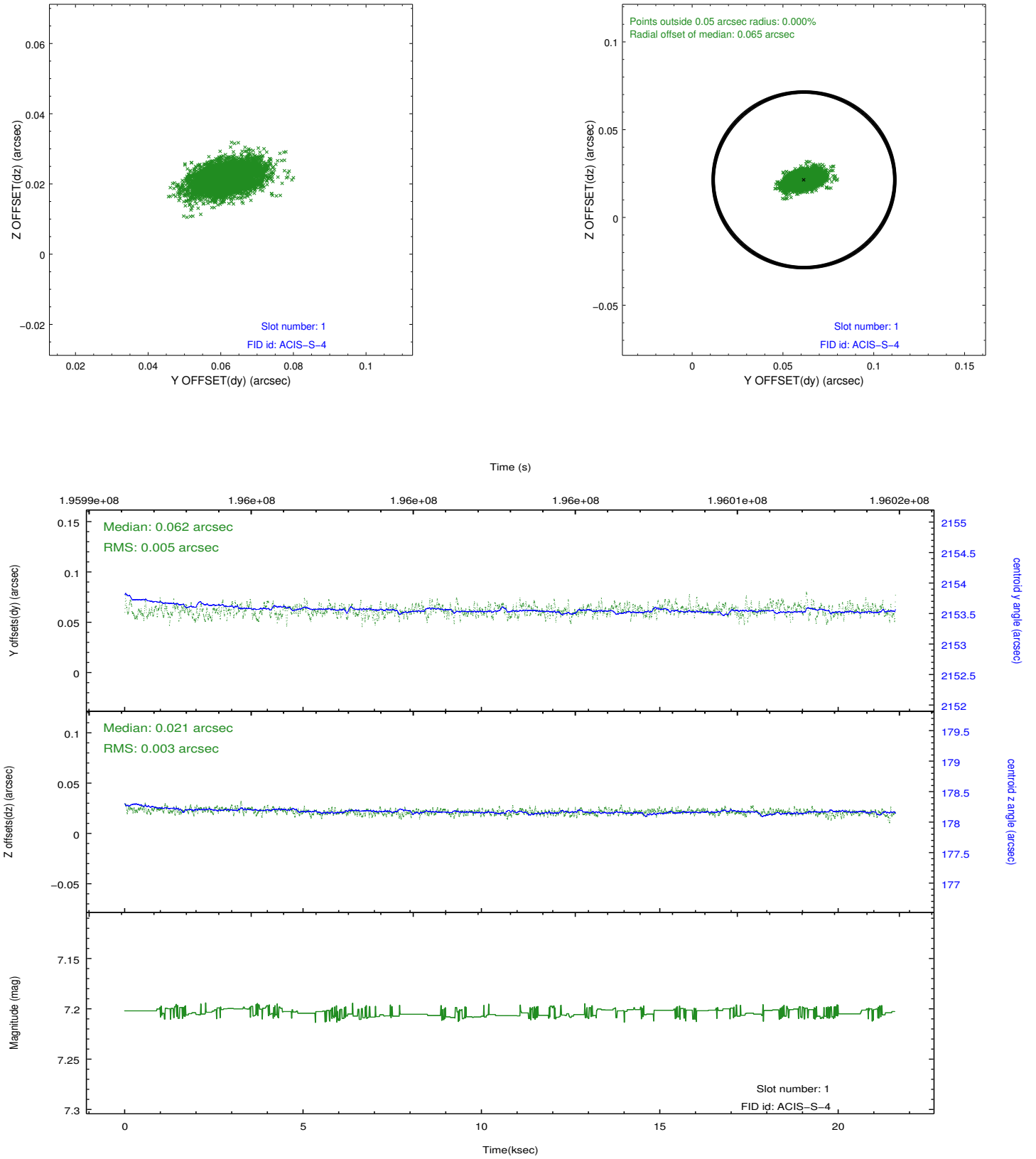


## 2.5 FID Slots

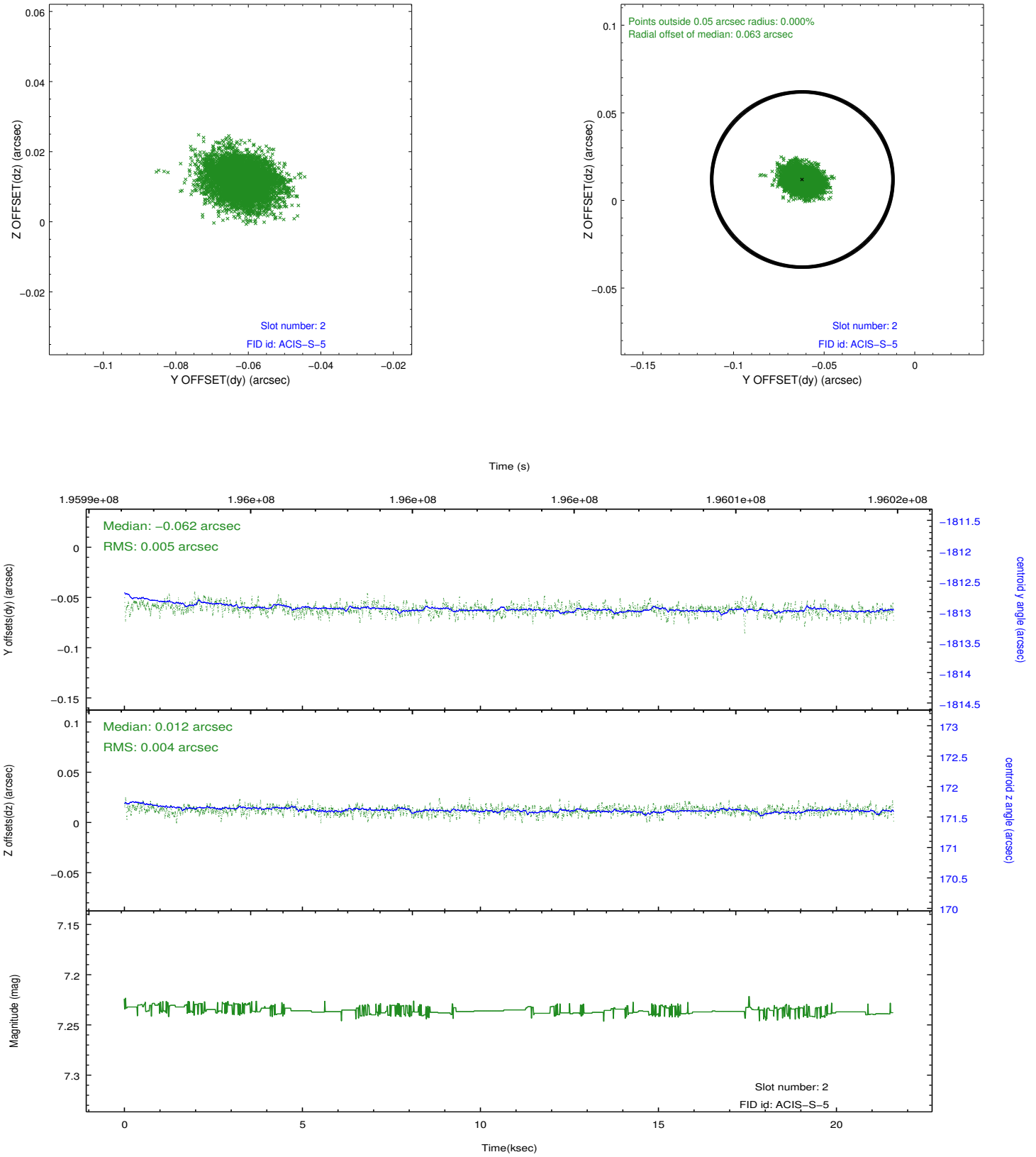
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

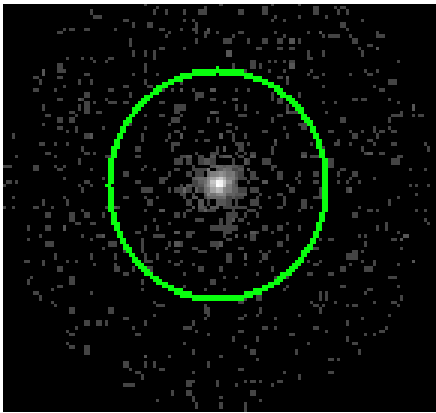


# 3 Gratings

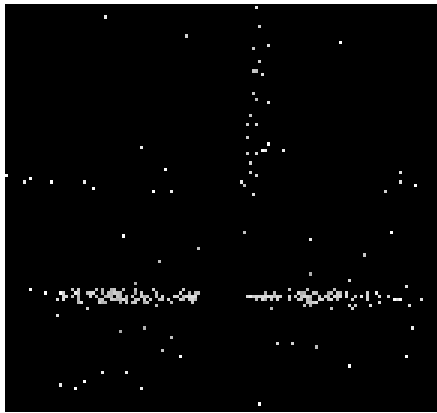
## 3.1 HEG Arm



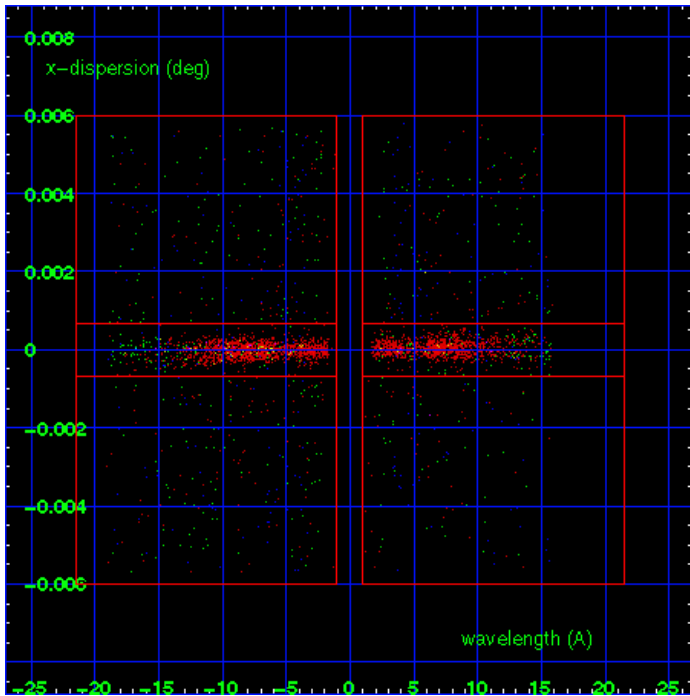
HEG Order Sort 123



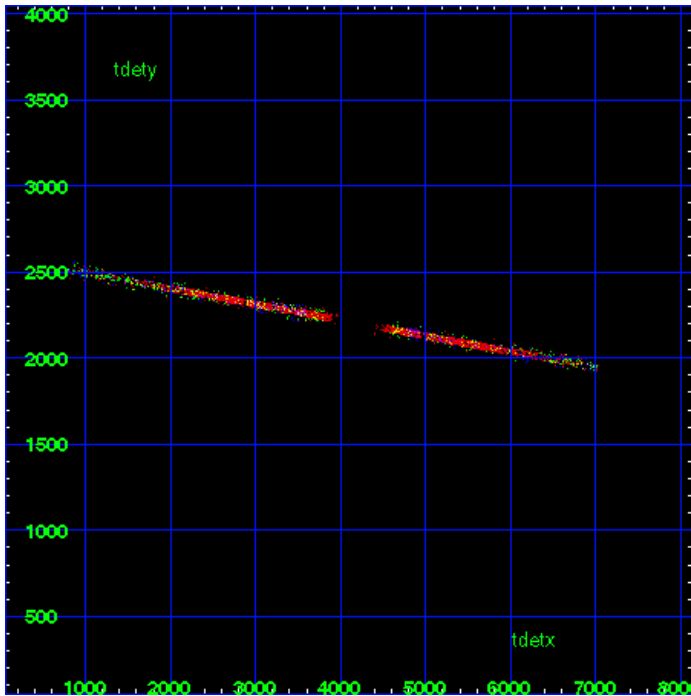
HEG Zero Order



HEG Order Sort ALL

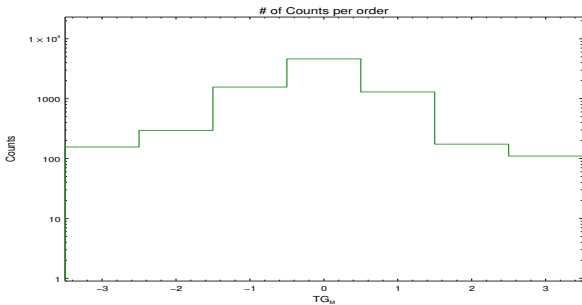


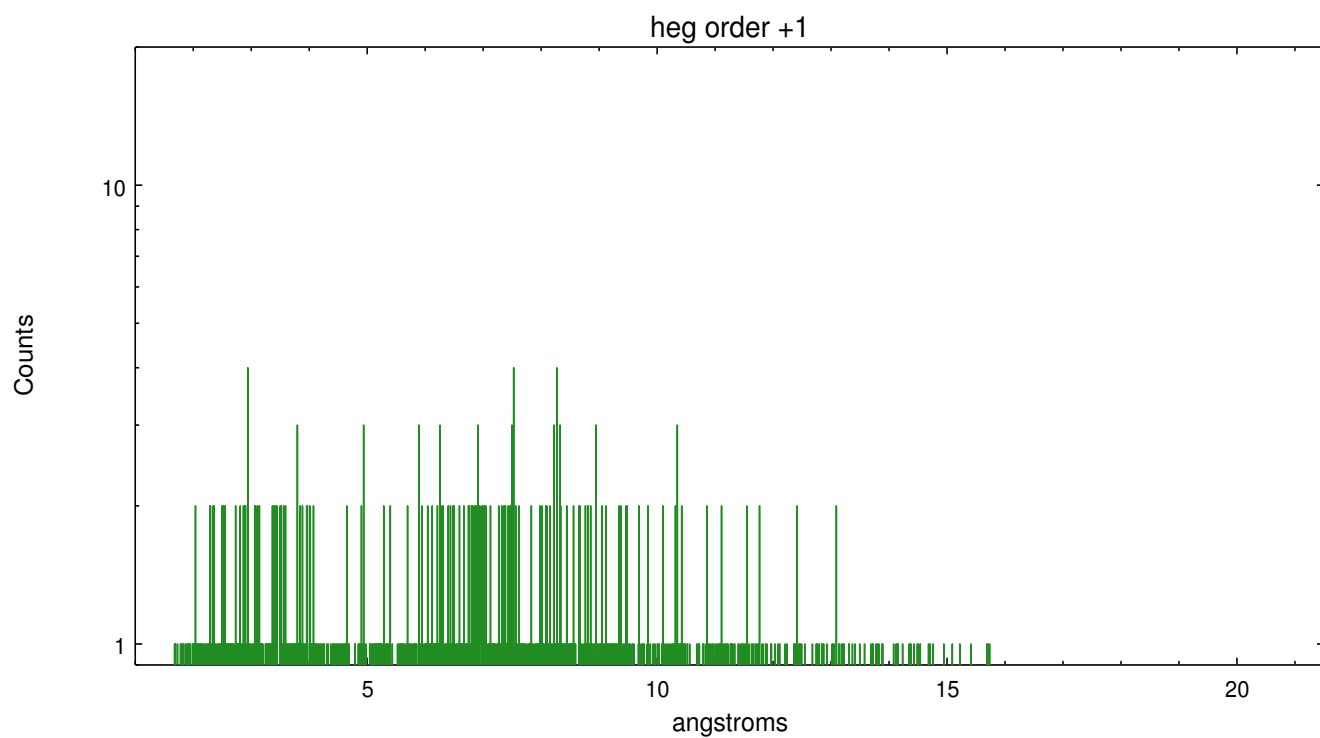
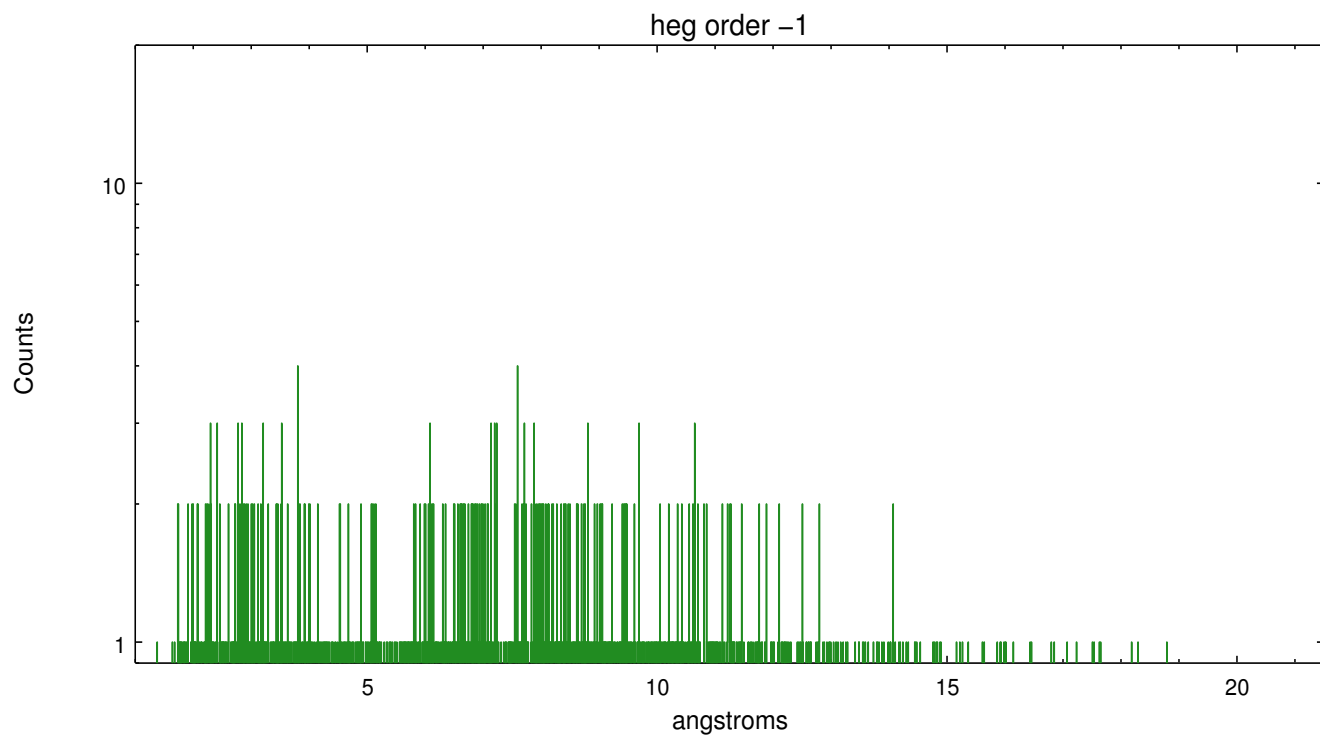
Spot Image HEG



Full Detector HEG

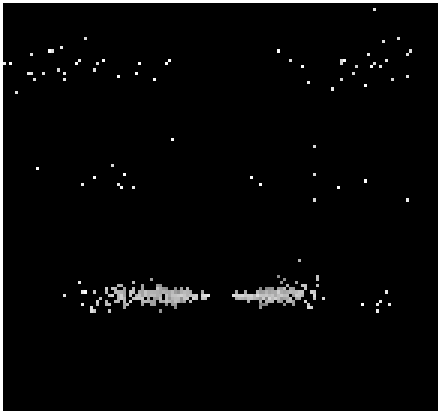
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	156	295	1564	4615	1295	174	110



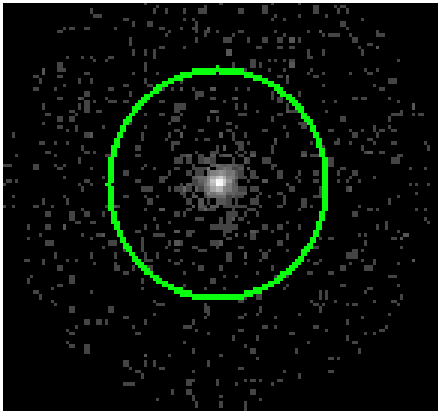




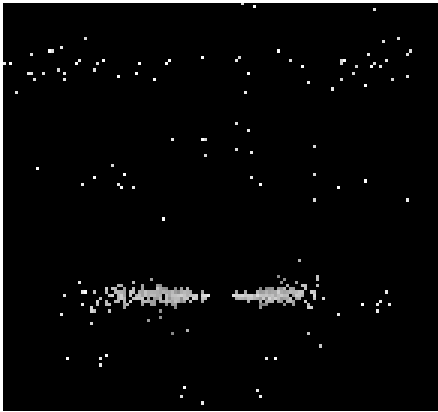
3.2 MEG Arm



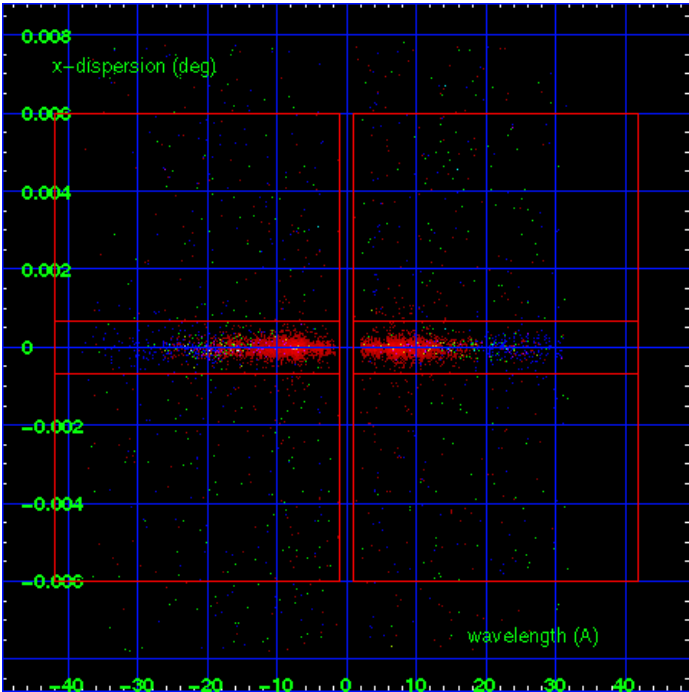
MEG Order Sort 123



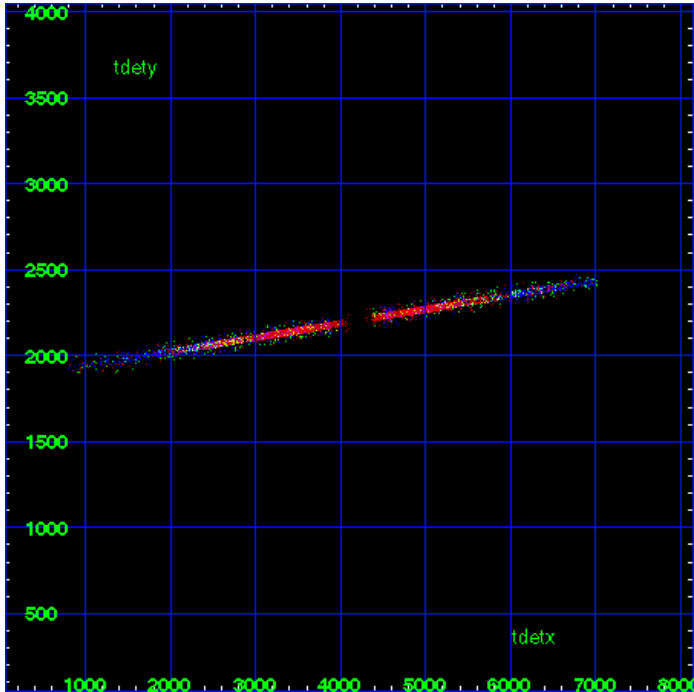
MEG Zero Order



MEG Order Sort ALL

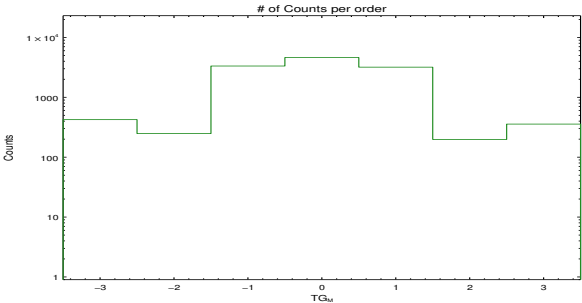


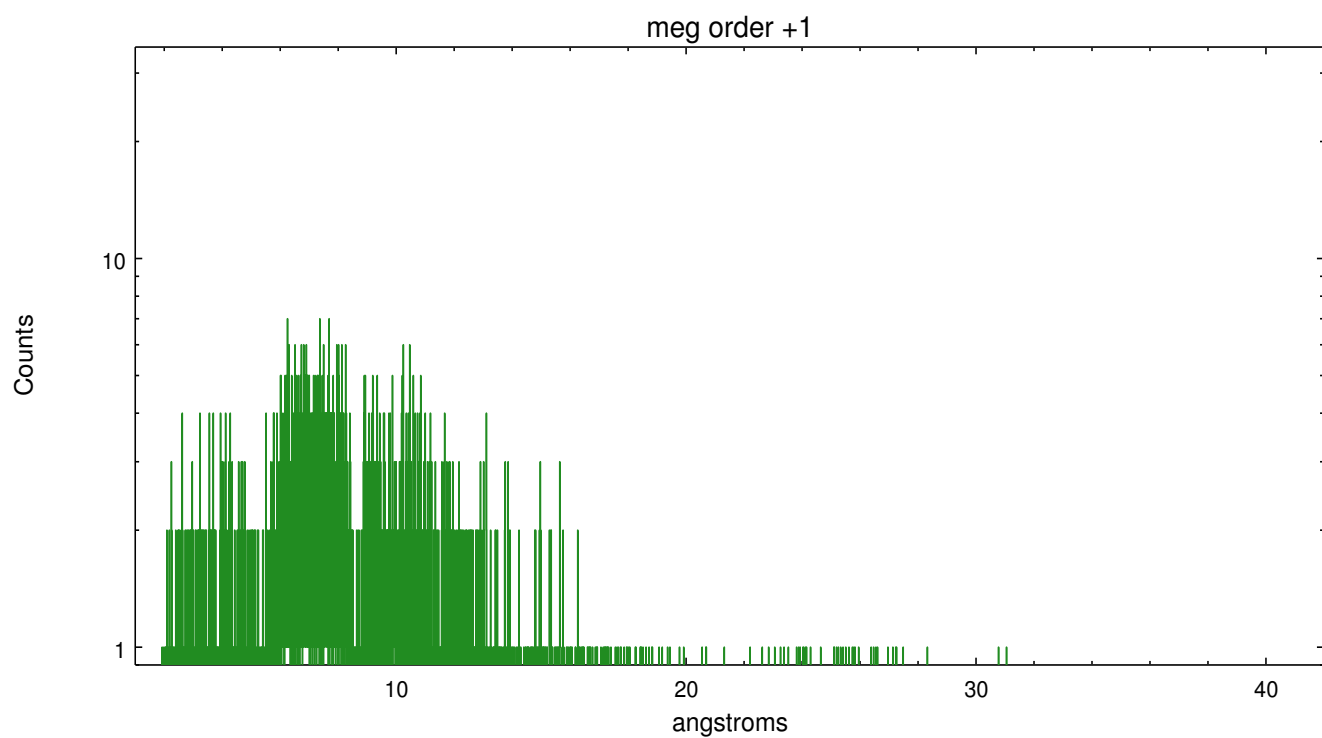
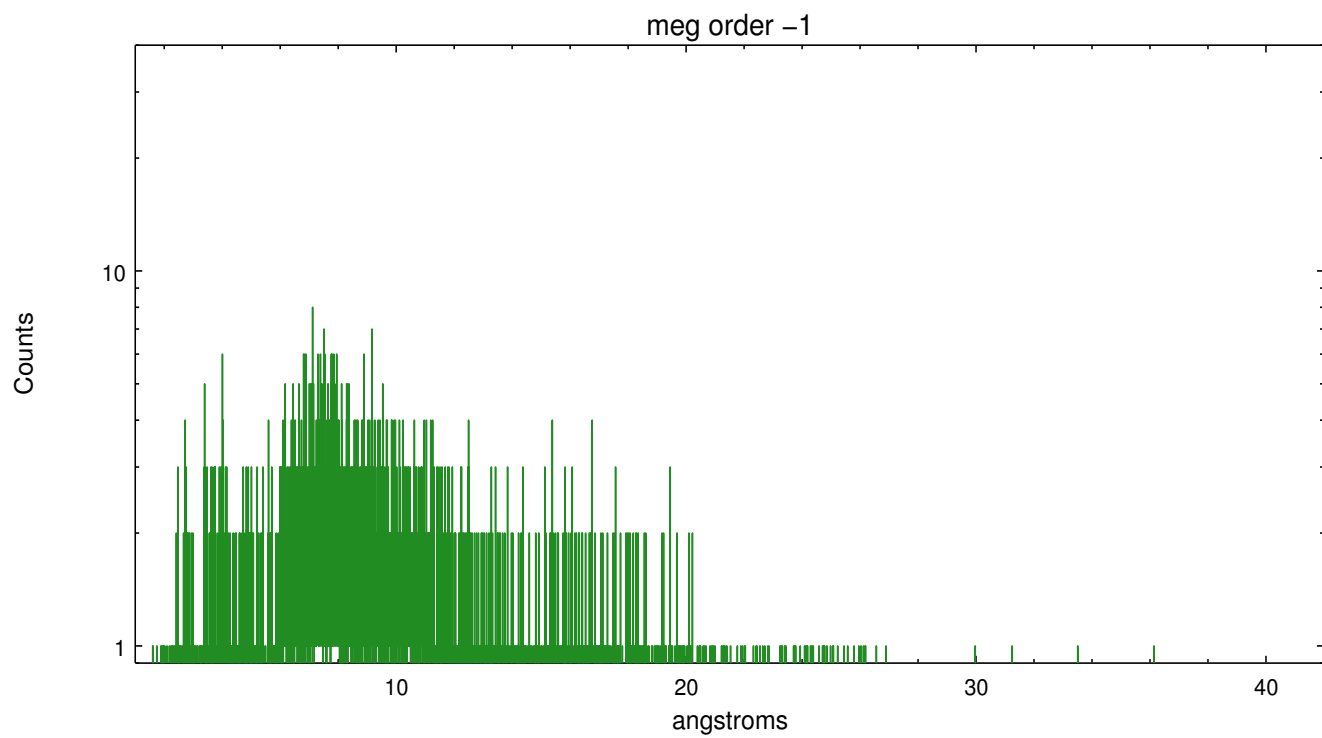
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	424	248	3331	4615	3187	198	357





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	21.26

### A.2 Comments